filed 9/3/99. Thus appropriately, this case should be first to issue, and then, if necessary a disclaimer will be filed in 09/792,967. Since both cases are being prosecuted by the same attorney, care will be exercised to insure that non double patenting issues arise, and if so,in 09/792,967, the appropriate disclaimer will be filed.

Claims 40 and 41, now claims 46 and 47, have been changed to recite that the droplets are of "picoliter size", which is supported by the specification at page 11, line 9.

In view of the foregoing, applicant respectfully solicits reconsideration and allowance.

The inventor wishes to add the following technical comments in order to assist the Examiner in understanding our invention as against Balch and Haff patents.

---- The Balch method uses an electro-osmotic and/or electrophoretic force to apply an electric current through a solution after the solution has come into contact with the substrate. Thus, high polymers are made to move by the effects of the electric current which factually travels from the solution to the wetting solution, that is capillary..solution...wetting solution.. substrate.

Our invention is totally different in that the capillary and substrate are kept at all times apart from each other, and thus, no electric current flow therethrough. Instead, voltage is applied across the capillary and substrate so that an electric field is produced therebetween. A solution electrified with these electric fields is attracted toward the substrate from the bottom end of the capillary. A small (called marginal) amount of the solution is then

made to swell out of the bottom end and by force of the attraction dribbled and deposited onto the substrate. Our method of deposition does not require the substrate to be wetted with the solution, as does the Balch method.

Also, in our invention, it is possible to deposit an extremely small amount (called 'marginal amount') of solution at the moment the solution comes into contact with the substrate, since the attractive force arises between the solution and the substrate before the contact occurs. Thus, our invention is based on a technical principle which is totally different from that of Balch's method wherein an electro-phoretic force does not arise until the solution comes into contact with the substrate.

Also, for the Examiner's benefit, please note that although DNA is amplified in the capillary, the amplification is not a requirement of the invention wherein depositing of the solution onto the substrate is featured. Moreover, please note that PCR can be speeded up by using thinner capillaries. In our invention, it is possible to redu e the oeprating time and prevent contamination with dust, by using both PCR and thin capillaries for spotting DNA solution at the same time. These advantages are nowhere found or made obvious by Balch or Haff singly or in combination.

In view of the foregoing, allowance is respectfully solicited.

respectfully,

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